

Notice of Allowability

Application No.

10/807,223

Examiner

Leonard S. Liang

Applicant(s)

ARAI, TAKEO

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the response filed on 12/12/06.
2. ☒ The allowed claim(s) is/are 1-3, 5-11, 13 and 22-35.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

03/03/07
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EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

- Cancel withdrawn claims 14-21 (please note that these claims were withdrawn without traverse in the response to election/restriction filed on 04/19/06)

Election/Restrictions

In the response to election/restriction filed on 12/12/06, the applicant argues, "Applicant respectfully disagrees with and traverses this Requirement, at least because the Examiner has not established that examining both of the indicated species would constitute an undue burden. However, to be fully responsive, Applicant elects species I, directed to an image recording device, wherein a second image forming process is a process for a background, for examination on the merits, with traverse."

In general, the Examiner disagrees with the Applicant because even similar species, when mutually exclusive, can demand different searches, and thus impose a burden on the Examiner. For example, below is listed the art of Ben-Zur et al (US Pat 7134749), which the Examiner believes would be more pertinent to unelected claim 24 than to elected claim 1.

However, a new update search has been conducted and claims 1-3, 5-11, 13, and 22-23 are considered allowable. Despite any burden, to advance prosecution of the case, the Examiner

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also checked for the allowability of unelected claims 24-35 and found them to be allowable as well. The examiner will hence withdraw the election/restriction requirement made on 11/20/06.

Allowable Subject Matter

Claims 1-3, 5-11, 13, and 22-35 are allowed.

The following is an examiner's statement of reasons for allowance:

There are numerous pieces of art that recite different limitations in the claimed invention.

For example, Hoshino (US PgPub 200400413893) discloses a structure of a plurality of line heads arranged alternately with a plurality of UV light sources. Hoshino also discloses that there can be white ink jetted from the line heads. However, Hoshino does not disclose a controller that controls "the second recording recording head to start discharging the second ink after a conversion of the first ink on the recording medium becomes not less than 30 %, wherein the second image forming process is a process for a background, and a layer of the second ink has a transmission density not less than 0.15 or an L value not less than 65." Nor does Hoshino disclose a controller that controls "the second recording head to start discharging the second ink after a conversion of the first ink on the recording medium becomes not less than 30 %, wherein the first image forming process is a process for background, and a layer of the first ink has a transmission density not less than 0.16 or an L value not less than 65." Furthermore, Hoshino does not properly qualify as prior art because it does not beat the applicant's earliest claimed foreign priority date.

Ben-Zur et al (US Pat 7134749) discloses a method and apparatus for color printing on a dark textile piece, the method including the steps of digitally applying a white ink layer directly

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onto a textile piece, optionally curing the white ink layer, and digitally printing a colored image on the ink layer. As mentioned above, Ben-Zur et al would be highly pertinent to claim 24 because it discloses a first image forming process that is a process for background. However, like Hoshino, Ben-Zur also lacks disclosure about transmission density and L value. Ben-Zur also does not qualify as prior art because it does not beat the applicant's earliest claimed foreign priority date.

Hirai (US Pat 7014310), like Hoshino, discloses a configuration of alternating ink jetting sections and light sources. Unlike Hoshino, Hirai qualifies as prior art. However, Hoshino is silent about using an image forming process as a process for background, as well as teachings of transmission density and L value.

Kondo (US PgPub 20030149130) discloses a white ink composition with a transmission density of at least 0.15 and a L value of at least 65. Kondo would appear to be an ideal secondary reference to combine with a primary references like the above listed references. However, due to the limitations of the above references, even the combination of a reference like Hirai in view of Kondo would not address every limitation of the claimed invention. While another reference could be thrown into the combination, the Examiner feels that such a combination would be too tenuous to sustain. There are certain limitations such as "after a conversion of the first ink on the recording medium becomes not less than 30 %," which one of ordinary skill in the art may consider implied by some curing references, such as Hirai. However, such a limitation is not explicitly disclosed. To apply such natural suggestions to an already tenuous combination seem to the Examiner to be too much to reject.

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In summary, there are no limitations in the claimed invention that the Examiner considers to be novel. However, the combination of these various limitations are specific enough that the Examiner cannot make a strong basis of rejection. Therefore, the claims are allowed.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard S. Liang whose telephone number is (571) 272-2148. The examiner can normally be reached on 8:30-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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